

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004579**Date Inspected:** 10-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Chih-Ming**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Corner assemblies**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG assembly bay 2

QA was informed by American Bridge Fluor (ABF) QA identified as Mr. Peter Shaw that cracked tacks were discovered on corner assembly bulk head to side panel weld joints. This QA observed and photographed cracked tacks at the following locations on corner assembly identified as CA-029A OBG section 6CW:

7 of 8 tacks cracked on bulkhead identified on material as CSD2-PP043.5.

3 of 8 tacks cracked on bulkhead identified on material as CSD2-PP044.5.

4 of 10 tacks cracked on bulkhead identified on material as CSD2-PP045.5.

According to ZPMC QA identified as Mr. Testino Wang, ZPMCs technology department is currently investigating this issue and at this time has suspended further welding of the above mentioned bulkheads until a resolution to this issue can be reached.

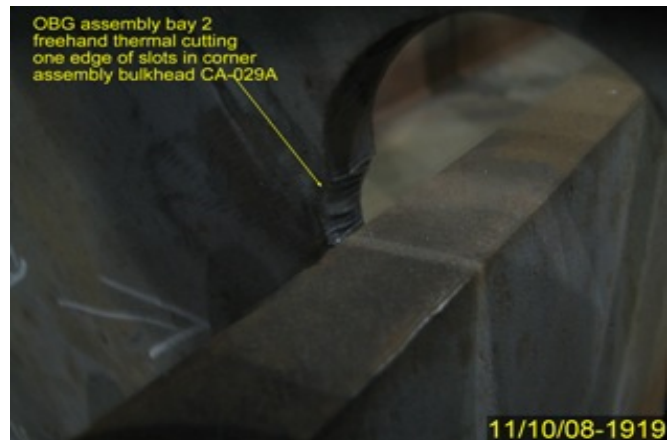
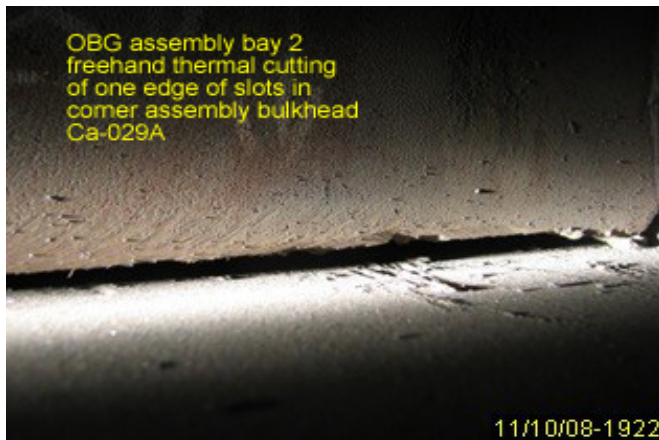
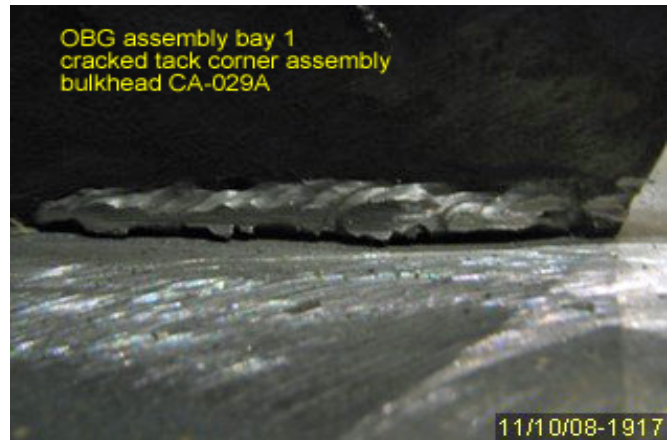
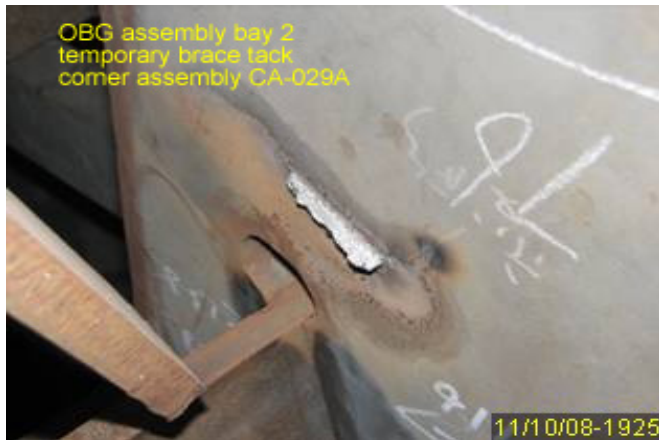
During this QAs observations of the above mentioned issue, QA discovered two other issues on this corner assembly that may be of concern. QA observed that ZPMC welding personnel have tack welded temporary knee braces from the corner assembly side panel to the "SPCM" bulkheads. Contract special provisions (section 10-1.59 Shop Welding) states, welding of temporary fixtures shall be shown on the working drawings and shall conform to AWS D1.5. These temporary braces are not shown on the drawings and AWS D1.5 2002 section 12.13.1.1 states

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that all tack welds used in assembly shall be located within the joint unless otherwise approved by the engineer. At this time this QA is not aware of any engineering approval to tack these braces to the SPCM material.

The second issue is concerning free hand thermal cutting of one edge of the slots in the bulkheads for clearance over the stiffeners on the side, edge and deck plates which requires engineers' approval according to AWS D1.5 2002 section 3.2.2 "Freehand thermal cutting shall be done only where approved by the Engineer". At this time this QA is not aware of any engineering approval to perform free hand thermal cutting specific to the slots in the corner assembly bulkheads. It appears as if the tack welding of temporary braces and freehand thermal cutting of the slots in the corner assembly bulkheads is present on most if not all of the corner assemblies fabricated to date. This QA has notified Caltrans QA task leaders Mr. Robert Cuellar and Mr. Albert Carreon as well as Structural Materials Representative (SMR) Mr. Peter Daughterman concerning all of the above mentioned issues Via E-mail on this date. Depending on Mr. Daughterman's response, incident reports may be forthcoming for some or all of these issues in the near future.



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Summary of Conversations:

As mentioned above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

Inspected By:	Hall,Steven	Quality Assurance Inspector
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Reviewed By:	Cuellar,Robert	QA Reviewer
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